

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P474207

Luminaire Tested: **24CZ2-165VHE-RDP-UNV-L830-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474207
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-165VHE-RDP-UNV-L830-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS W/ RDP
INSERT
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10689.5 lumens
Efficiency: N/A
Efficacy: 87.5 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

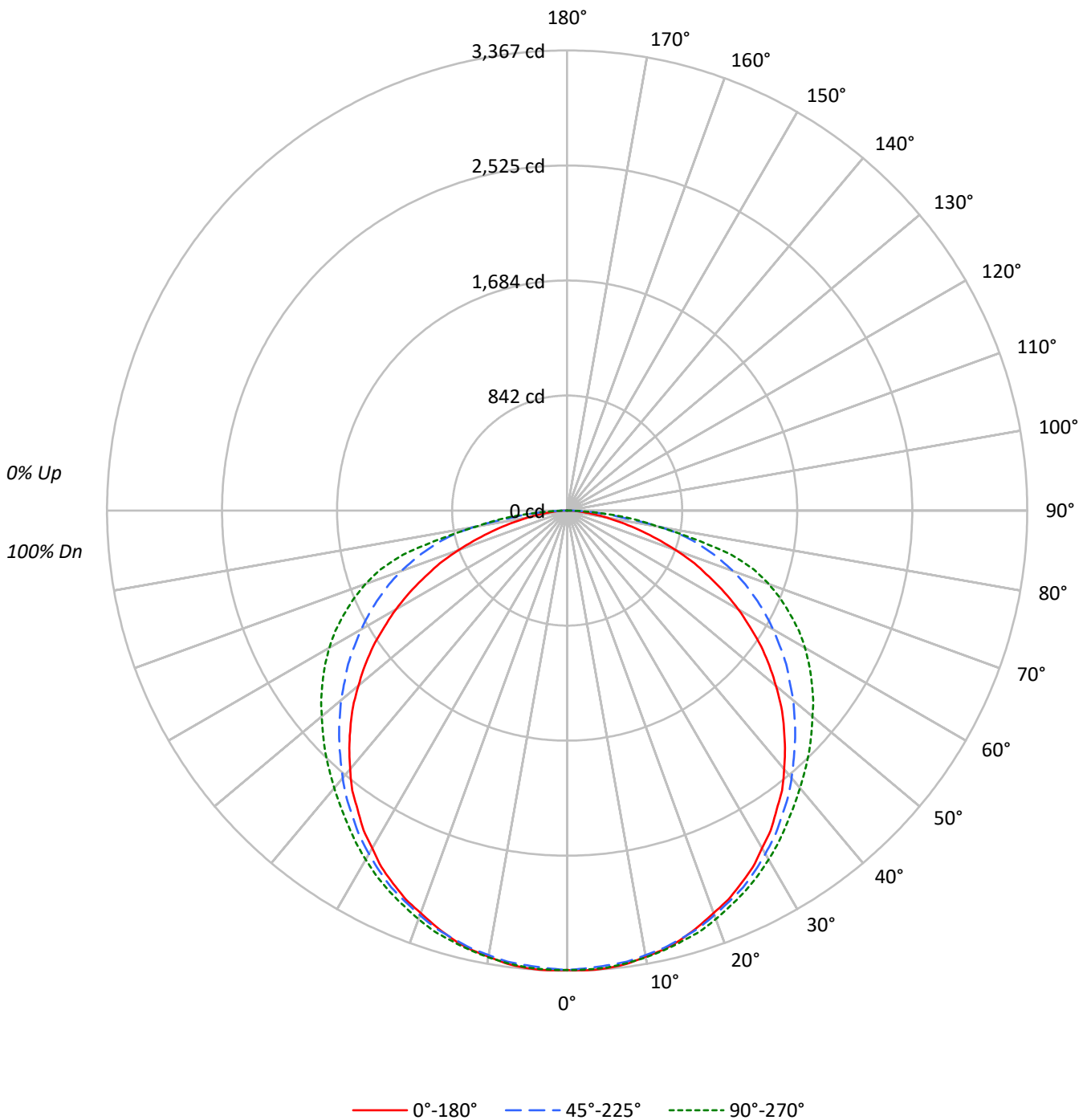
Input Watts (W): 122.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4523	4523	4523
5°	4540	4512	4533
10°	4528	4513	4535
15°	4520	4513	4542
20°	4487	4510	4555
25°	4471	4518	4566
30°	4432	4506	4580
35°	4389	4493	4598
40°	4340	4488	4656
45°	4268	4490	4761
50°	4173	4517	4906
55°	4067	4590	5125
60°	3896	4680	5408
65°	3646	4844	5739
70°	3316	5069	6173
75°	2810	5347	6450
80°	2220	5380	5216
85°	1638	4094	4587



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	318.9	3.0
10°-20°	917.8	8.6
20°-30°	1403.4	13.1
30°-40°	1715.5	16.0
40°-50°	1828.5	17.1
50°-60°	1748.3	16.4
60°-70°	1481.0	13.9
70°-80°	995.3	9.3
80°-90°	280.9	2.6
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	2640.0	24.7
0°-40°	4355.5	40.7
0°-60°	7932.4	74.2
0°-90°	10689.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10689.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3362	3362	3362	3362	3362	
5°	3362	3356	3340	3356	3356	319
15°	3245	3245	3240	3266	3261	915
25°	3012	3022	3043	3070	3075	1388
35°	2672	2693	2736	2789	2799	1674
45°	2243	2280	2360	2460	2502	1730
55°	1734	1797	1956	2110	2185	1544
65°	1145	1262	1522	1723	1803	1137
75°	541	737	1029	1204	1241	579
85°	106	218	265	286	297	131
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3361.7	3361.7	3361.7	3361.7	3361.7
2.5°	3367.0	3367.0	3351.1	3361.7	3361.7
5°	3361.7	3356.4	3340.5	3356.4	3356.4
7.5°	3345.8	3340.5	3329.9	3345.8	3340.5
10°	3314.0	3314.0	3303.4	3319.3	3319.3
12.5°	3287.5	3282.2	3276.8	3298.1	3292.8
15°	3245.0	3245.0	3239.7	3266.2	3260.9
17.5°	3192.0	3197.3	3202.6	3223.8	3229.1
20°	3133.6	3144.2	3149.5	3181.4	3181.4
22.5°	3080.6	3085.9	3096.5	3128.3	3128.3
25°	3011.6	3022.2	3043.4	3070.0	3075.3
27.5°	2942.6	2947.9	2974.5	3011.6	3016.9
30°	2852.5	2868.4	2900.2	2942.6	2947.9
32.5°	2772.9	2788.8	2825.9	2868.4	2879.0
35°	2672.1	2693.3	2735.7	2788.8	2799.4
37.5°	2581.9	2597.8	2650.9	2709.2	2725.1
40°	2471.0	2502.3	2555.4	2624.3	2650.9
42.5°	2359.6	2391.5	2455.1	2544.8	2576.6
45°	2242.9	2280.1	2359.6	2460.4	2502.3
47.5°	2126.2	2168.7	2258.8	2375.5	2423.3
50°	1993.6	2046.6	2158.0	2290.7	2343.7
52.5°	1866.3	1929.9	2051.9	2200.5	2269.4
55°	1733.6	1797.3	1956.5	2110.3	2184.6
57.5°	1585.1	1670.0	1845.1	2020.1	2099.7
60°	1447.7	1526.8	1739.0	1929.9	2009.5
62.5°	1299.2	1405.3	1632.9	1834.4	1914.0
65°	1145.3	1262.0	1521.5	1723.0	1802.6
67.5°	1007.4	1134.7	1410.6	1611.6	1691.2
70°	843.0	1002.1	1288.6	1489.6	1569.2
72.5°	689.1	864.2	1161.2	1357.5	1431.8
75°	540.6	736.9	1028.6	1203.7	1240.8
77.5°	403.2	609.5	890.7	965.0	938.4
80°	286.5	488.1	694.4	657.3	673.2
82.5°	185.7	371.3	429.7	488.1	503.4
85°	106.1	217.5	265.2	286.5	297.1
87.5°	47.7	79.6	106.1	106.1	100.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)